

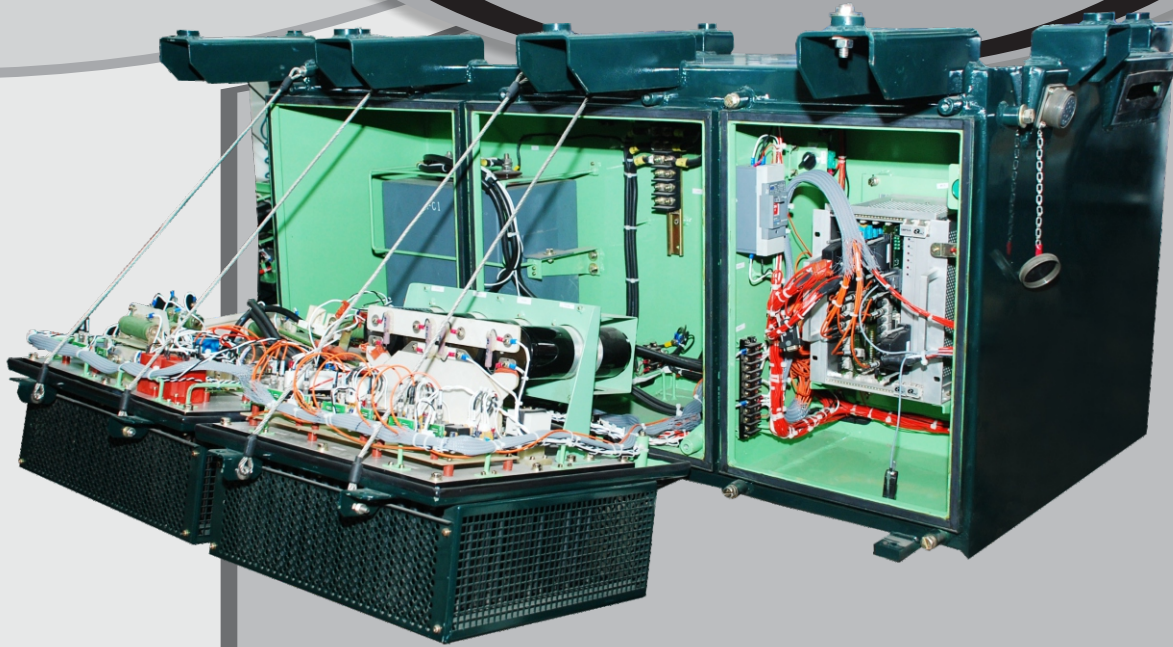


**AAL**<sup>®</sup>

**Autometers Alliance Ltd**

# 25 kVA UNDERSLUNG CONVERTER

For Head-On-Generation  
Based Passenger Coaches



## **Autometers Alliance Ltd**

has developed 25 KVA Underslung IGBT-Based Static Converter for Head-On-Generation in technical collaboration with Hyundai Heavy Industries Co. Ltd., South Korea. The converter employs state of the art DSP control and feeds the stabilized power to air conditioning and other loads of the railway passenger coaches. The product has been built in accordance with IEC 60571, IEC 61287-1 and IEC 60310.

## **Salient Features**

- Under carriage mounting of converter saves space for 2 extra berths inside the coach, enhancing revenue earnings.
- Under carriage mounting also prevents noise pollution, adding to passenger comfort.
- Sturdy MS sheet fabricated enclosure, with special protective surface treatment, makes it ideal for under carriage mounting.
- IP 65 protection makes the enclosure impervious to water, even in flood situations.
- High efficiency leads to low power consumption.
- Being naturally cooled the converter does not require any moving parts for cooling. This enhances life and reliability.
- Vacuum pressure impregnation using 'H-class' resins for filter inductors makes it ideal for traction duty.
- Maintenance free, being fully static.
- Converter's modular design makes it easily accessible through side panels and affords easy maintenance.
- State of the art DSP based system.
- Fault logging facility for ease of maintenance.
- Data transfer through serial communication between onboard display and under slung converter.
- Control and monitoring through onboard interactive VFD panel.
- PC interface facility for downloading of logged data and online monitoring.

## Applications

- Converts single phase AC supply available from the locomotive transformer into 3-phase 415V, 50 Hz supply.
- Feeds 3-phase power to the loads, viz., air conditioning, lights, ventilation, pantry, and the like of the passenger coaches.



## Technical Specifications

### A. Input

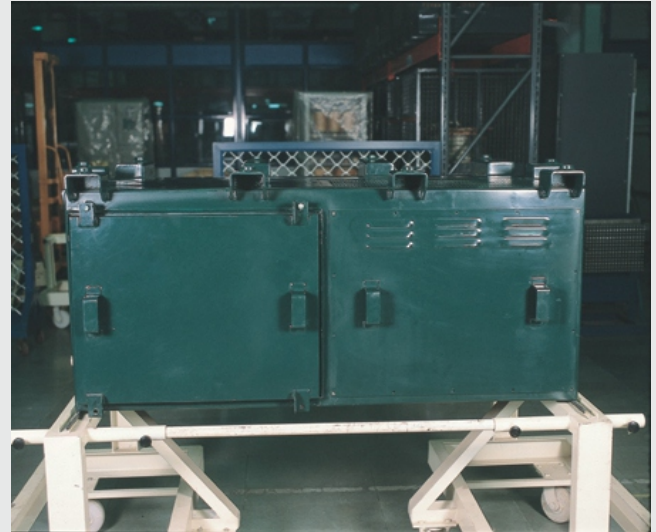
Features	Values
Minimum voltage	465 V, 1ØAC, 50 Hz
Nominal voltage	675 V, 1ØAC, 50 Hz
Maximum voltage	925 V, 1ØAC, 50 Hz

### B. Output

Features	Values
Output capacity	25 kVA
Output voltage	415V $\pm$ 5%, 50Hz $\pm$ 3%, 3-phase PWM sine wave
Current harmonics at full load	Less than 5% up to 20thharmonic
Efficiency at full load	$\geq$ 92%

### C. Control function

Feature	Value
Supply voltage	77-140 V DC



### D. General

Features	Values	
Operating ambient temperature	-5° to 55°C	
Cooling	Natural cooled	
Mounting	Main cubicle	Under carriage
	Display panel	Onboard
Size: main cubicle	1630 x1040 x724mm	
Weight (including display (including display cubicle)	~540 kg	



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